Datasheet

MODULAR HYDROGEN REFUELER DISPENSING STATION

M/H DUTY REFUELING WITH HIGH-RELIABILITY AND PERFORMANCE

Today's medium-duty and transit fleets demand cost effective and reliable hydrogen dispensing solutions for their operations. The Ivys Modular Refueler (MRF) is a versatile, and readily deployable H2 dispensing solution.
We proudly design & manufacture our products in the USA.

KEY BENEFITS

Dispense Rates up to 7.2 kg/min Maximum

Readily Compatible to any Pressurized Hydrogen Source

Back-to-Back Fill Capable up to 60kg Vehicle Tanks

Allows Scalable Operation with Non-stranded Capital

Proprietary Dynamic Flow Control Ensures Peak Fueling Performance

Factory-Tested and NRTL Labeled for Safety Ensuring Quick Installation

MRF shown with 1000-kilograms of hydrogen mobile pipeline at 520 Bar

IVYS Energy Solutions

ENABLING E-MOBILITY

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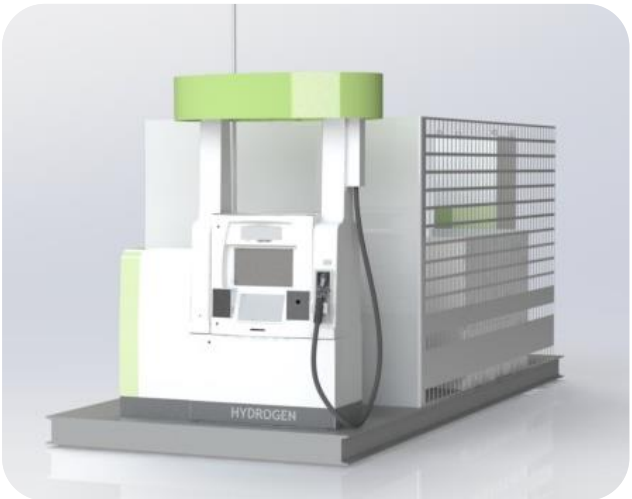
TECHNICAL SPECIFICATIONS

The Ivys Modular Refueler (MRF) is a low-cost, versatile, and readily deployable H35/H70 dispensing solution for hydrogen vehicles.

Integrated with hydrogen cooling, automated fueling and station controls, the MRF can easily couple with delivered gas, on-site generation or delivered liquid for scaled fleet operations.



MODEL	MRF-H35-AMB	MRF-H35-FAST	MRF-H70-FAST
Fueling Rates[a]	Up to 3.6 kg/min. Maximum	Up to 3.6 kg/min. Maximum Future: 7.2 kg/min. Maximum	Up to 3.6 kg/min. Maximum
Nominal Fill Pressure[a]	350 Bar (H35)	350 Bar (H35)	700 Bar (H70)
Fueling Method[b]	TIR SAE J2601-2 Type C Non-Cooled	TIR SAE J2601-5 T0 to T20 Pre-Cooled	SAE J2601-1 T20 Pre-Cooled
Vehicle Tank Categories[b]	2 to 40 kilograms	6 to 180 kilograms	2 to 10 kilograms
Fueling Connection	SAE J2600 Hydrogen Nozzle, Break-Away & Hose; SAE J2799 IrDA Interface Included Maintains Hydrogen Purity in accordance with SAE J2719 and ISO 14687-2		
Hydrogen Supply Sources[c]	Can be configured to accept Delivered Gas or LH2, or On-Site Gas Generation supplies; Up to 5-Bank Cascade Control included for Gaseous Supply Modes		
Dispenser User Interface and Data Interfaces	Fleet Dispenser Housing with 10" Color Display; Touchscreen HMI Provided Optional Fleet Card or RFID Tag Authorization and Web-based Data Access available		
Installation Ratings[d]	Environmental Operating Temperature Rating: -30°C to +45°C; Outdoors Installation Only 10-Year Service Lifetime		
Utilities and Process Connections	120 / 208 / 240 VAC ± 10% 20 Amp Feed Required 1Ph + TN-S Ground, 50/60 Hz Power: Less than 750 Watts Air Supply & H2 Vent Included	480 VAC ± 10% 100 Amp Feed Required 3Ph + TN-S Ground, 50/60 Hz Power: 18 to 30 kW based on configuration and usage Air Supply & H2 Vent Included	
Product Safety[e,f,g]	NRTL Labeled Includes Dispenser UV/IR Flame and Flammable Gas Detection, ASME Pressure Safety Valves, Local Emergency Stop, Site Fire Panel Tie-In Connections, and Backup UPS Power for Equipment Monitoring Hazardous Equipment Rating: C1D2 Group B or C1Z2 Group IIC; Noise Emissions: < 85 dBA at 1-Meter		

NOTES:
(a) Maximum fill rate or settled pressures as allowed by the fueling protocols. Actual performance will vary based on upstream supply pressure and station storage capacity, vehicle tank volume, vehicle initial pressure, ambient temperature and station utilization. Performance is not guaranteed. Contact Ivys Energy Solutions for more information.
(b) SAE J2601-2 and SAE J2601-5 are technical information reports (TIR) and not an industry standardized fueling protocol. Validation to this report is not achievable via industry agreed upon methods or testing procedures. On site validation may be required.
(c) Hydrogen supply to be supplied by customer. Contact Ivys Energy Solutions for more information.
(d) Assumes adherence to regular maintenance and installation in non-coastal area. Customer is responsible for performing regular preventative maintenance including equipment calibration, safety valve inspection, dispenser hose replacement and nozzle rebuild. Failure to maintain equipment properly may result in reduced performance or damage.
(e) Noise rating excludes upset conditions such as safety valve activation and noise from low temperature chiller system.
(f) Standard H2 vent mast(s) provided designed in accordance with CGA G5.5. Equipment shall be sited by customer to comply with NFPA-2 and requirements of local jurisdictions.
(g) Hazardous equipment ratings apply to Dispenser System Only. Non classified equipment located outside of hazardous area per area classification assessment and requirements in NFPA-2

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